Attorney's Docket No.: 12406-155001 / P2004,0388 US

Applicant: Gupta et al. Serial No.: 10/812,568 Filed : March 30, 2004

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REMARKS

In reply to the Office Action of November 9, 2005, Applicant submits the following remarks. Claims 1, 6-7 and 13 have been amended. Claims 25 and 26 have been added. Support for claim 25 can be found at least on page 6, lines 15-18. Support for claim 26 can be found at least on page 13, line 22 through page 14, line 6. Claims 1-4, 6-7 and 9-26 are now pending after entry of this amendment. The specification has been amended on page 17 to correct typographical errors. Applicant respectfully requests reconsideration in view of the foregoing amendments and these remarks.

Section 102 Rejections

Claims 1-4, 6-7, 9-13, 15-18, 21 and 24 were rejected as anticipated by U.S. Application Number 2004/0101618 ("Ottermann"), claims 1-4, 14, 17, 18, 21 and 24 were rejected as anticipated by U.S. Application Number 2004/0266207 ("Sirringhauss") and claims 1, 6-7, 9-12 and 15 were rejected as anticipated by Multi-colour Organic Light-emitting Displays by Solution Processing, Nature, Vol. 421, February 2003, 829-833 ("Müller"). Applicant respectfully disagrees in light of the amendments to claim 1.

Amended claim I is directed to an organic electronic device having a deposition surface having at least one deposition region defined thereon, wherein each deposition region is formed by a pocket in a layer of resist. A plurality of organic layers is in the deposition region. A first portion of at least one of said organic layers is cross-linked.

Otterman describes dip coating a substrate 1 in a liquid 3 (FIG. 1, paragraph 58). A light emitting device 7 that is formed by dip-coating can have a glass substrate 8, a transparent, conductive layer and an electroluminescent layer 12, where the electroluminescent layer 12 is the dipped layer.

Otterman fails to suggest or disclose a deposition region that is formed by a pocket in a layer of resist. Rather, Otterman describes forming a coating across an entire surface by dipcoating. There are no pockets or resist layers that form pockets on Otterman's substrate 1.

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Sirringhauss describes using cross-linking to form high-resolution patterns of layers in an organic switching device (Abstract). In some examples, an electroactive polymer film 3 is coated onto a substrate (FIG. 1, paragraph 33). A portion of the film is irradiated and becomes insoluble in a particular solvent. The rest of the polymer film is washed away in a bath of the solvent. A crosslinking agent can be added to the polymer film. A portion of the film is irradiated to crosslink the portion and to make the portion insoluble. In another example, a surface modification layer 34 is patterned and modified using an irradiation technique (FIG. 13, paragraph 97). The modification layer can be a polyimide and can be used to confine a later deposited solvent that dissolves underlying polymer layers 35, 36. A via-hole made in the modification layer 34 is then filled with a conducting polymer 38.

Sirringhauss fails to suggest or disclose a deposition surface having at least one deposition region defined thereon, wherein each deposition region is formed by a pocket in a layer of resist and a plurality of organic layers is in the deposition region. Rather, Sirringhauss describes an electroactive agent on a substrate without a resist (FIG. 1). Sirringhauss also describes a modification layer 34 that forms a via in which a single layer of conducting polymer 38 is deposited (FIG. 14).

Müller describes spin coating a soluble polymer onto the substrate, irradiating the polymer through a mask and developing the non-irradiated areas to remove them from the substrate (page 832, col. 1).

Müller also does not suggest or disclose a deposition region that is formed by a pocket in a layer of resist. Rather, Müller uses irradiation of a polymer to keep desired areas of polymer and allow non-desired areas of polymer to be removed.

For at least the above reasons, the applicant submits that claim 1 as amended is not anticipated by Otterman, Sirringhauss or Müller. Any of the claims depending from claim 1 are similarly not anticipated. Claims 2-4, 6-7, 9-18, 21 and 24 depend from claim 1.

Applicant respectfully requests withdrawal of the anticipation rejections.

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Section 103 Rejections

Claims 1-4, 6, 7, 9, 13, 15, 17-22 and 24 were rejected as unpatentable over U.S. Publication No. 2003/0170492 ("Anderson"). Applicant respectfully disagrees in light of the amendments to claim 1.

Anderson describes a touch screen with conductive layers 18, 30 (paragraph 40). The conductive layers are cross-linked (paragraph 34). An OLED 40 is under the conductive layers 18, 30 (paragraph 41).

Anderson fails to suggest or disclose a deposition region that is formed by a pocket in a layer of resist. Nor does Anderson suggest or disclose a plurality of organic layers in a deposition region where a first portion of at least one of said organic layers is cross-linked. Rather, Anderson describes OLED materials 40 with cross-linked conductive layers 18, 30 over the OLED materials 40. For at least this reason, the applicant submits that no *prima facie* case of obviousness has been made in light of amended claim 1 or the claims that depend from claim 1. Claims 2-4, 6, 7, 9, 13, 15, 17-22 and 24 depend from claim 1.

Claim 23 was allegedly rejected as anticipated by Ottermann in view of U.S. Patent No. 5,766,799 ("Shi"). The applicant believes that the rejection was meant to be an obviousness rejection. Whether claim 23 was rejected as anticipated or obvious, the applicant respectfully traverses in light of amended claim 1.

Claim 23 depends from claim 1 and necessarily requires the limitations of claim 1.

Shi describes injecting and transporting layers of an OLED that contain fluorescent materials (Abstract).

Shi is silent on a deposition region that is formed by a pocket in a layer of resist, as is Otterman. For at least this reason, the applicant submits that no *prima facie* case of obviousness has been made for claim 23 in light of amended claim 1. Nor is claim 23 anticipated by Shi or Otterman.

Applicant respectfully requests that the obviousness rejections be withdrawn.

Section 112 Rejections

Claim 13 and 24 were rejected under 35 U.S.C. § 112, ¶ I, as failing to comply with the written description requirement. The Examiner states the "the claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claims invention." In particular, the Examiner does not see where the specification clearly describes or sets forth "constituents capable of crosslinking" with regard to the PEDOT:PSS solution in claim 13 or a light detecting layer in claim 24. The applicant respectfully traverses.

Claim 13 requires that the hole transport layer is fabricated from a PEDOT:PSS solution including constituents capable of cross-linking.

The applicant directs the Examiner's attention to page 17 of the specification, starting at line 19. "A PEDOT:PSS solution is comprised of water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS") (this solution is referred to, herein, as a PEDOT:PSS solution and may be combined with or contain other components as well. . . . the solution may be blended with cross-linking side groups or chains which will bind to the base solution (such as the PEDOT:PSS) to render it insoluble."

Claim 24 requires that at least one of the first and second organic layers is an emitting layer or a light detecting layer.

The applicant directs the Examiner's attention to page 22, starting at line 7, "In addition to materials that emit light, active electronic layer 420 may include a light responsive material that changes its electrical properties in response to the absorption of light." Additionally, on page 23, starting on line 13, "If the organic electronic device is an organic solar cell or an organic light detector, then the organic polymers are light responsive material that changes its electrical properties in response to the absorption of light."

The applicant notes that the standard for written description does not require that the terms in the claim be found verbatim in the specification (MPEP, § 2163.02 "The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement."). Rather, if one of ordinary skill in the art would recognize that the inventor had possession of the invention at the time of filing, the claim is supported by the specification. A person of ordinary skill in the art would understand that an organic light detector, with organic polymers that are light responsive material that change their electric properties in response to the absorption of light, would support "a light detecting layer."

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Applicant respectfully requests that the indefiniteness rejections be withdrawn.

Please apply the one-month extension of time fee in the amount of \$120.00, excess claim fees in the amount of \$100.00 and any other required charges or credits to deposit account 06-1050.

Respectfully submitted,

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